



**Supreme
Heating**

Specialists in heating for homes & pools

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OPERATING INSTRUCTIONS - SS3DT AUTOMATIC CONTROLLER

The SS3DT series of automatic controllers are microprocessor controlled. They are used to control the heating of your pool/spa from your solar collector.

INSTALLATION:

Your automatic controller should be mounted on a wall close to a power outlet and both your filter pump and solar pump. Where possible, it should be located to minimise exposure to weather.

- 1: Plug your solar pump into the point provided on the underside of the automatic controller.
- 2: Plug your filter pump into the point provided on the underside of the automatic controller.
NOTE: If your filter pump is plugged into a salt chlorinator, leave the filter pump plug in place and plug the salt chlorinator into the socket labelled "filter " underneath the automatic controller.
Make sure the salt chlorinators time clock is switched to manual. Do not leave it on automatic.
- 3: Set the SS3DT time clock to the current time of day. The clock runs on a 24 hour system.
- 4: Set the timer for an appropriate filtration time. Recommended filtration times are;
Summer: minimum of 6 hours per day. ie: 10:00am to 4:00pm.
Winter: minimum of 2 hours per day.
(See the clock setting diagram for further instructions)
- 5: Plug the automatic controller directly into a power outlet.
- 6: Turn the power outlet on so as power is supplied to the automatic controller.
- 7: Press the ON button for a few seconds (this button has a built in time delay system). Once the unit is on, a green light next to the ON button should be lit.
- 8: Ensure the automatic controller is set to the AUTO mode. This is evident by the green light next to the AUTO / MANUAL button being lit.

HOW DOES IT WORK:

Your automatic controller has two temperature sensors. One on the roof sensing the temperature of the solar collector, the other in your plumbing system sensing your pool water temperature. When the temperature of the collector is 7°C greater than that of the pool water, the automatic controller will turn your solar pump on. This will push water through the solar collector, in turn heating your pool.

The automatic controller will turn the system off for one of two reasons.

- 1: The temperature of the roof sensor drops to within 2 °C of the pool water sensor. Therefore no significant heat gain can be achieved.
- 2: The pool water has reached its pre-set maximum temperature.

It is important to understand that your solar system operates simultaneously with your filtration system. You cannot run your solar pump independently. However, you can run your filtration system without running the solar system.

- 3: The time clock component of your SS3DT controls your filtration system.
- 4: The solar component of your SS3DT is built with a system that ensures that the solar pump never runs on its own.



SETTING THE PRE-SET MAXIMUM TEMPERATURE:

The SS3DT series of automatic controllers allows you to set a maximum desired pool water temperature.

- 1: Press the SELECT button once. This will change the display from the current pool temperature to your pre-set maximum temperature.
- 2: Use the UP and DOWN buttons to adjust your pre-set maximum temperature. The display will return to the pool temperature after a few seconds.

NOTE: Pressing the SELECT button twice will change the display to current solar collector temperature.

SET TEMPERATURE / AUTO SAMPLING

If your pool has reached its PRE- SET temperature it will activate the automatic sampling mode. Because the POOL sensor is located in the pipework around the solar pump and not in the actual pool itself it can heat up quicker and give a false reading. The purpose of this mode is to avoid inaccurate pool temperature readings and create more accurate running times. Sampling will occur every 2 hours and the SS3DT will turn on the pump for 5 minutes whenever the ROOF temperature is above the SET temperature. If the ROOF temperature is below the SET temperature, the unit will not sample avoiding night time operation.

COOLING (TROPICAL MODE)

This function can be used in Tropical climates where the pool temperature is too hot. Of a night when the ROOF temperature is 7° C or more below the POOL temperature it will turn on the pump and circulate water and cool it to the SET temperature if possible. It will turn off if the SET temperature is reached or if the ROOF temperature rises to within 2° C of the pool water temperature.

To activate Tropical mode – Holding the SET button for 5 seconds while displaying the ROOF temperature will allow cooling mode to be activated. Up and down arrows are used to change this setting and the SET key to exit. (Or wait 60 seconds)

The possible settings are:

“H” for heating only.

“HC” for heating and cooling (Tropical)

SENSOR DIAGNOSTICS

The following errors are now displayed along with flashing lights to indicate a faulty sensor or cable.

Flashing “OC” Open circuit (possible break in cable)

Flashing “SC” Short circuit (possible damaged wires making contact)

Note: the relevant flashing sensor needs to be selected for the above messages to be seen.

WHAT ELSE DO I NEED TO KNOW:

- 1: It is recommended that you use your solar system during the solar season only. The solar season usually begins in mid September and finishes around May. During this time you shouldn't have to do anything except set your pre-set maximum temperature. The automatic controller will do the rest for you.
- 2: At the end of the solar season simply turn the system off by pressing the SENSORS OFF button. Reduce your filtration time on the time clock to two hours per day. It is important to leave power supplied to the unit. Whilst the unit is turned off it will operate the solar pump for ten minutes each day. This stops any stagnation occurring in the system and also keeps the pump in good order. This is called '**winter mode**'.

- 3: The manual operating mode will run your solar pump regardless of weather conditions. It is for the use of service personnel only.
- 4: The SS3DT is built to allow maximum heat gain whenever possible. This means that if it is hot enough on the roof to heat your pool when your filtration system is not set to be on, the solar controller will over ride the time clock and switch on your filter pump and the solar system. You may sometimes filter your pool for longer than the prescribed time set on your time clock.

BACKWASHING:

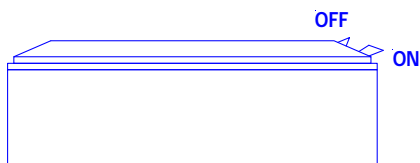
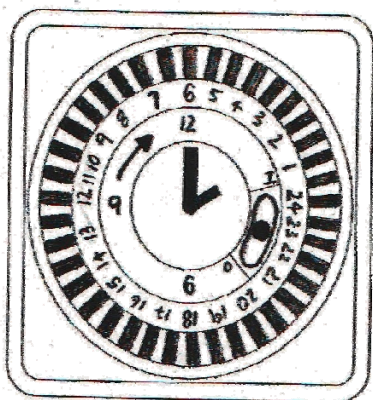
Since you are running your solar simultaneously with you filtration system it is important to follow the following steps when backwashing your pool.

- 1: Turn the solar system off. Do this by pressing the sensors off button. This is important so that you have control of your timer as mentioned in item 4 above.
- 2: Adjust the time switch to the continuously off position. (See setting the clock instructions)
- 3: Adjust the multiport valve to the backwash position.
- 4: Adjust the time switch to the continuously on position. (See setting the clock instructions)
- 5: Repeat step 2 and then adjust multiport valve to the rinse position. Once in the rinse position repeat step 4.
- 6: Upon finishing the complete backwash process, return the time switch to the centre position and turn the solar sensors on.

NOTE: It is important to use the above process to backwash your pool as it gives you complete control of the system without any automation, which could cause serious problems.

If you have any questions regarding the operation of your automatic controller don't hesitate to call the manufacturer Supreme Heating.

SETTING THE CLOCK



COARSE ADJUSTMENT: Turn switching dial in the direction of the arrow until the current time is almost opposite the marking arrow.

FINE ADJUSTMENT: Continue turning the minute hand in the direction of the arrow until the current time is opposite the marking arrow.

The clock drawing opposite is set to 2:00am.

MAIN TIMER SWITCH



**CONTINUOUS
ON**



TIMER MODE



**CONTINUOUS
OFF**

The large switch is used to set the clock operation. When set in the middle position it allows the clock time segments to switch the clock on and off. Each segment represents 15 minutes. When set to the I (up) position the clock is always on. When set to the O (down) position the clock will always be off.

Left is a diagram showing the on / off positions of the clock time segments.



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